

Therapy of Viral Encephalitis

BETWEEN 1,500 and 3,000 cases of encephalitis are usually reported to the Center for Disease Control in Atlanta each year. In most of these patients no specific etiologic diagnosis can be established; however, postinfectious states, arboviruses and herpes simplex virus account for most of the identifiable causes. The outcome of these illnesses is variable, and depends at least in part on the infecting virus and the age of the patient; however, between 5 and 10 percent of patients with viral encephalitis die and a less certain percentage are left with permanent neurological disabilities. Because of these hazards there exists considerable interest in the development of some form of effective treatment. The devastating effects of herpes simplex encephalitis (mortality rates between 25 and 50 percent) combined with the availability of several chemotherapeutic agents with *in vitro* efficacy against this virus has led to a number of clinical investigations utilizing these drugs. To date, idoxuridine has been established to be more harmful than beneficial and cytosine arabinoside, which also possesses major toxic effects, has been found to be of questionable value at best. Poly I:C (a complex nucleotide, synthetic polyinosinic-polycytidylic acid), an effective interferon inducer, has also been tried but offers little hope because of its adverse effects. Adenine arabinoside is currently being tested, and the question of its effectiveness awaits the outcome of controlled studies.

No specific therapy is available for arboviruses, but interferon and its inducers have been shown to be effective against experimental arbovirus infections when given before or shortly after the administration of virus. No extensive clinical trials of the substances have been undertaken.

Lastly, postinfectious encephalitis, usually associated with mumps, measles or chicken pox, may well be mediated in many cases by conditions other than direct viral invasion of the brain. Many investigators feel immunological phenomenon may be important in these disease processes. No antiviral agent has been shown effective in these disorders.

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REFERENCES

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Mitral Valve Prolapse

MITRAL VALVE PROLAPSE is the most common cause of mitral regurgitation. Although prolapse may result from or be associated with Marfan's syndrome, ischemic heart disease, atrial septal defect and hypertrophic cardiomyopathy, there is no identifiable cause in most involved patients. Myxomatous degeneration of the mitral (and occasionally the tricuspid) valve is commonly present in this syndrome.

Auscultation of a variable midsystolic click or late systolic murmur, or both, strongly suggests the diagnosis. Examination during postural maneuvers may intensify or clarify the pathological findings. When the patient squats, the click moves toward the second sound and the murmur is abbreviated and softened. Standing after squatting moves the click toward the first sound, and greatly intensifies and lengthens the murmur.

Most patients are asymptomatic. However, there is a subset of subjects with mitral valve prolapse in whom both symptoms and associated abnormalities are present. A clinician should suspect prolapse when confronted with a young, often anxious, thin patient complaining of fatigue and chest pain or palpitations, or both. Women outnumber men two to one among these patients. Bony abnormalities such as kyphoscoliosis, pectus excavatum and "straight back syndrome" are common. On electrocardiograms, inferior lead T wave inversion, prolonged Q-T interval and frequent atrial or ventricular premature beats may be seen. Exercise may cause ST segment depression and increase the frequency of premature beats, especially after the exercise. Rarely, a life-threatening arrhythmia such as ventricular tachycardia occurs; ventricular fibrillation and sudden death have been reported.

Findings on echocardiography may be diagnostic, showing there to be systolic posterior excursion of one or both mitral leaflets. Cardiac catheterization is rarely indicated for diagnosis, but if the characteristic leaflet billowing is shown to exist and coronary arteries are judged by angiography to be normal, these may help establish that coronary obstruction is not causing the patient's chest pain.

Antibiotic prophylaxis is indicated for dental or potentially contaminated surgical procedures. Propranolol, 40 to 320 mg per day, should be used for symptomatic or life-threatening arrhythmias. Refractory ventricular arrhythmias have